

Guide for
Architects - Engineers

Specifications

Vol 3

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CHAPTER 1

GENERAL INSTRUCTIONS

1.1 General. Specifications shall normally be prepared and Submitted in two parts. The first submittal shall be the outline specifications at the concept design or early preliminary submittal and The second shall be the project specifications at the final design submittal. The notes in the back of some guide specifications begin with the sentence: "This guide specification is to be used in the preparation of project specifications in accordance with ER 1110-345-720." The referenced engineering regulation (ER) will not be issued in addition to these instructions. For your convenience, pertinent portions of the ER are included in the following text. Therefore, compliance with these instructions will constitute compliance with the ER.

1.1.1 Outline specifications (35 percent and 60 percent submittals) shall list or describe in a general way the material to be included in the contract specifications. Outline specifications are reviewed by Corps of Engineers and the using agencies to determine if the final specifications will be generally complete and meet project and Corps of Engineers requirements. Outline specifications shall conform to Construction Specification Institute's (CSI) Master Format for numbering of technical specification sections. Instructions for preparation of outline specifications are covered in chapter 2 of this manual.

1.1.2 Project specifications (100 percent submittals) are the .final construction specifications for a specific project prepared by the A-E. Project specifications are used with the final drawings for bidding purposes. Instructions for preparation of project (final) specifications are covered in chapter 3 of this manual.

1.1.3 OCE and Seattle District Prepared Guide Specifications. Guide specifications issued or officially implemented by Office of the Chief of Engineers (OCE) and Seattle District establish the form to be used for the technical requirements of construction specifications and, as far as practicable, the specific requirements to be included. The guide specifications are intended to promote uniformity of construction throughout the Corps of Engineers, provide requirements that have been coordinated with industry, and serve as convenient worksheets to be marked by the specification writer preparing project specifications. Some of the requirements in the guide specifications have general applicability to all projects, while other requirements that vary from project to project have blanks to be filled in; alternative words, phrases, or paragraphs to be chosen; or special paragraphs to be added. Where parentheses or brackets are used to indicate alternative requirements, the parentheses or brackets shall be removed from the expression chosen to be a part of the project specifications. Guidance on choices is provided in general and technical notes at the end of the guide specifications, or in applicable technical manuals. These sources shall be fully utilized.

1.2 Statement of Method and Materials. When guide specifications are not available, a statement of the method of construction and materials to be used shall be stated in the outline specifications in lieu of an outline based on the above mentioned guide specifications.

1.3 Specification Format. Organization and number of specification division shall conform to the latest CSI format. Numbering of specification sections shall also confine to the CSI Master Format. Paragraph format and numbering shall be as used in the guide specifications. Guide specifications are being revised to incorporate the three-part CSI format (general, products and execution).

1.4 Availability of Referenced Specifications and Standards. Referenced specifications and standards listed in the various guide specifications are available for inspection in Specifications Section, Seattle District, U.S. Army Corps of Engineers, 4735 East Marginal Way South, Seattle, Washington.

1.4.1 Federal and Military Specifications or Standards. All requests for copies of these documents shall be submitted on DD Form 1425 (Specifications and Standards Requisition) to: Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, Pennsylvania 19120. When requesting a specification or standard, the request shall indicate the title, number, date, and any applicable amendment thereto by number and date. When DD Form 1425 is not available, the request may be submitted in letter form, giving the same information as listed above and the solicitation or contract number involved. Such requests may also be made to the Naval Publications and Forms Center by telephone (215) 697-3321 or (215) 697-2667.

1.4.2 Ordering Guide Specifications. INDEX OF GUIDE SPECIFICATIONS will be furnished to the architect-engineer (A-E). Necessary sections should be ordered after the materials of construction have been determined, but prior to the preparation of the outline specification. It is not usually necessary to order a guide specification for a subject that might become part of the project, depending on the outcome of a study of alternatives. To order OCE and Seattle District guide specifications, mark the desired guide specifications required on the INDEX OF GUIDE SPECIFICATIONS and submit to the Seattle District project manager.

CHAPTER 2

INSTRUCTIONS FOR PREPARATION OF OUTLINE SPECIFICATIONS

2.1. Source of Specification Material. Sources of specification material for use in the preparation of outline specifications shall be as follows:

- a. OCE Guide Specifications.
- b. Seattle District Guide Specifications.
- c. Specifications prepared by the A-E.
- d. SPECTEXT, CSI's, Master Guide Specification (when Federal guide specifications are not available.
- e. Guide Specifications prepared by other Government agencies.

2.2. Preparation of Outline Specifications. The A-E shall determine type of specification to use as a basis for the outline specifications except as directed. A-E shall use listed guide specifications required in Foundation and Materials (F&M) Branch's geotechnical report, and if not used, shall state reason why not used.

2.2.1 Based on Guide Specifications. When outline specifications are based upon Guide Specifications, they shall consist of a tabulation of which guide specifications are to be used for each section of the proposed project specification and a listing of "specific data" thereto. OCE guide specifications and Seattle District prepared specifications may be ordered from the project manager by ordering the ones needed from a current copy of Index of Guide Specifications for Military Construction (EP 3100P0).

2.2.2 Based on Architect-Engineer Specifications. For work not covered by Corps of Engineers Guide Specifications, the outline specification shall consist of a statement of method and materials proposed for use during construction which will be A-E prepared specifications.

2.2.3 Typing Paper. Outline specifications shall be typed on bond as specified in chapter 4 for project specifications.

2.3 Format for Outline Specifications. The outline specifications will follow the latest CSI Master Format for division and section titles and numbers as specified herein and as illustrated in exhibit 2A at the end of this chapter. Generally the Corps of Engineers Guide Specification (CEGS) number shall be used unless it conflicts with CSI Master Format, in which case the section number shall be as shown in the CSI Master Format.

2.3.1 General. (See paragraph 1 of exhibit 2A.)

2.3.1.1 Under the "General" heading shall be a statement relative to what guide specifications are used as a basis for the outline specification. When guides are not available, the statement shall explain that the outline specification consists of a description of the methods and materials to be used to perform the construction, and that the project specifications consists of newly composed specification sections.

2.3.2 Specifications. (See paragraph 2 of exhibit 2A.)

2.3.2.1 For specifications based on guide specifications, a reference to the applicable specification by number is adequate when the project specification consists of only deletions of the inapplicable portions from the Guide Specifications. In other words, if listing a guide specification will serve the purpose, the "Specific Data" column shall contain the word "none."

2.3.2.2 The "Specific Data" column shall include only the following information if not indicated on the drawing:

- a. Reference or statement of Air Force criteria contained in AFM 88-15 and other Air Force manuals that differ from the Guide specifications.
- b. Selection of alternatives from notes at the end of Guide Specifications.
- c. Any special items that will be included in the project.
- d. Section titles used shall be the edited Guide Specification titles, not necessarily the exact title shown on the Guide Specifications.

CHAPTER 3

INSTRUCTIONS FOR PREPARATION OF PROJECT (FINAL) SPECIFICATIONS

3.1. General. The following material shall be prepared and submitted a minimum of 2 weeks prior to 90 percent review in accordance with the instructions contained in this chapter:

- a. Cover sheet (exhibit 3A).
- b. Schedule (exhibits 3B, 3C, and 3D).
- c. List of drawings and standard details bound in specifications (exhibit 3E).
- d. List of Government-furnished property (exhibit 3F).
- e. Table of contents Section C Technical Specifications (exhibit 3G).
- f. Measurement and Payment paragraphs (exhibit 3H).
- g. Submittal register, ENG FORM 4288 (exhibit 3I).
- h. Marked-up copy of specification Section 01400, Contractor Quality Control (exhibit 3J).
- i. Technical Specifications. Section 01025 or Division 1 and Divisions 2 through 16. A-E shall also provide a marked copy of 01400, provide a typed submittal register (ENG FORM 4288) for addition to Section 01300/01305 Division 1, and provide any additional input for Division 1 such as coordination requirements or scheduling of work.
- j. Marked-up guide specifications as requested.

3.2. Schedule. Exhibits 3B through 3D at the end of this chapter are examples of bidding schedules. Contracts can be prepared on a lump sum or unit price basis and can have additional work established as additive items or optional items. All project specifications shall contain a schedule.

3.2.1 Lump Sum Contracts. Bidding will be on a lump sum basis for most projects. Some lump sum projects will require two or more items with a "Total Bid" line at the bottom. This will be determined by the project manager (i.e., Item No. 0001, Building to a Line 5 Feet Beyond the Building Walls and Item No. 0002, Site Work and Utilities Beyond the Line 5 Feet from the Building Walls). Projects where grading, paving, and utility items are incidental to structures, quantities can be determined from the drawings, and the monetary value is small by comparison, will be bid on a lump sum basis. An example of a lump sum bidding schedule is shown at the end of this chapter as exhibit 3B.

3.2.2 Unit Price Contracts. Bidding will be on a unit price basis where (1) quantities cannot be determined in advance of advertising within limitations that would permit a lump sum bid without a substantial contingency; (2) quantities may change significantly during construction; (3) quantities of cement, pozzolan, and admixtures are directed by the Contracting Officer after award of contracts wherein Portland cement concrete mix design is the responsibility of the Government, or (4) quantities of cement, pozzolan, and admixtures are directed by the Contracting Officer after award of contracts wherein Portland cement concrete mix design is the responsibility of the Government.

3.2.2.1 The selection of unit price bid items will be made in accordance with and under the circumstances given above. An example of a unit price bidding schedule is shown at the end of this chapter as exhibit 3C.

3.2.2.2 Measurement and payment for each item must be covered completely and in a clear and concise manner. The provisions for such measurement and payment will be covered in specification Section 01025, Measurement and Payment. They shall be specially written and included. It is important that all items of work be covered in the measurement and payment paragraph and that they are complete in coverage, clear in meaning, and are in agreement with each other, and are not duplicated in other bid items. When no measurement is involved, the section shall be titled Payment. Exhibit 3H (1 through 3) contains examples of measurement and payment and payment paragraphs.

3.2.3 Additive Items: When it appears the funds available for a project may be insufficient for all desired features of the work, and additional funds will not be available after bid opening, a base bid item is established for the most desirable features while additive items are established for the balance of the features in order of priority. These additive features must be clearly described in specification Section 01025, Measurement and Payment. When multiple Items are used, consideration should be given to the estimated cost of each item and what might happen when award is made in accordance with the standard paragraph shown below.

Additive Items: (APR 1968) The low bidder for purposes of award shall be the conforming responsible bidder offering the low aggregate amount for the first or base bid item, plus (in the order of priority listed in the schedule) those additive bid items providing the most features of the work within the funds determined by the Government to be available before bids are opened. If addition of another bid item in the listed order of priority would make the award exceed such funds for all bidders, it shall be skipped and the next subsequent additive bid item in a lower amount shall be added if award thereon can be made within such funds. For example, when the amount available is \$100,000 and a bidder's base bid and four successive additives are \$85,000, \$10,000, \$8,000, \$6,000, and \$4,000, the aggregate amount of the bid for purposes of award would be \$99,000 which would include the base bid plus the first and fourth additives, the second and third additives being skipped because each of them cause the aggregate bid to exceed \$100,000. In any case all bids shall be evaluated on the basis of the same additive bid items, determined as provided above. The listed order of priority need be followed only for determining the low bidder. After determination of the low bidder as stated, award in the best interest of the Government may be made to him on his base bid and any combination of his additive bid for which funds are determined to be available at the time of the award, provided that award on such combination of bid items does not exceed the amount offered by any other conforming responsible bidder to the same combination of bid items.

Unless unusual circumstances exist, an additive should never have an estimated cost of less than \$1,000. For an example of a bidding schedule with additive items see exhibit 3D.

3.2.4 Optional Items: When it appears that funds available at bid opening (although additional funds will be made available during a specified period after bid opening) for a project may be insufficient for all desired features of work, a base bid item is

established for the most desired features while optional items are established for the balance of the features. The Government may increase the quantity of work called for by requiring the completion of one or more of the numbered line items identified in the Schedule as optional items. The Contracting Officer may exercise this option at any time within a period (usually 30 to 90 days) by giving written notice to the Contractor. These optional items must be clearly described in the specification Section 01025, Measurement and Payment. Award will be made in accordance with the standard paragraph shown below:

Optional Items: Notwithstanding any other provisions of this invitation, the Government will award the base bid item or items as a minimum. The Government may increase the quantity of work awarded by exercising optional bid item or items any time, but not later than the number of calendar days indicated after notice of receipt by Contractor of notice to proceed for base bid or not at all. Bidders shall bid on all items (base and optional). Bids will be evaluated for purpose of determining low bidder by adding the total price for the optional items to the total price for the base bid items. Evaluation of optional items will not obligate the Government to award these items. For an example of a bidding schedule with optional items see exhibit 3D.

3.3. List of Drawings. The drawing list shall include all contract drawings, reference drawings, and standard drawings in the format shown in exhibit 3E. All drawings shall be listed by exact title together with the District file number and the sequential sheet number.

3.4. List of Government-Furnished Property. Government-furnished, contractor installed property together with the approximate cost shall be listed on a sheet as shown in exhibit 3F.

3.5. Table of Contents:

3.5.1 The Table of Contents for Section C - Technical Specifications shall show the division and section titles and numbers. Divisions not used shall be marked "Not Applicable." For a sample Table of Contents, see exhibit 3G. A-E shall prepare final Table of Contents to cover all specification divisions (1 through 16).

3.6 PREPARATION OF TECHNICAL SPECIFICATIONS: The District will furnish current guide specifications for use in the preparation of specific technical specification sections based on same. These specifications will be provided as hard copies or computerized format consistent with the information provided by the project manager. The Technical Specifications sections shall be prepared from and shall be consistent with the approved outline specifications.

3.6.1 Deviations. The requirements in the guides will not suit every project; therefore, some tailoring will be required. This "tailoring" may be accomplished by use of the "authorized deviations" listed below.

3.6.1.1 Authorized Deviations.

a. Changes required or permitted by Department of the Army publications or OCE publications, design directives or letters, or the "Notes" section of the guide specifications.

- b. For Air Force projects only, tailoring to comply with the requirements of AFM 88-15.
- c. Changes to reduce requirements for submittal of technical data and samples for noncritical items of relatively low value as compared to the cost of making the submittal.
- d. Deletion of inapplicable text material or insertion of additional needed text material (as necessary to tailor the specifications to fit a specific project) subject, however, to compliance with all regulations, procurement policies, criteria controls, and other explicit guidance established by official publications. Except when required to do so as result of explicit guidance mentioned herein, additional text material will not be added unless it is absolutely necessary in order to construct the specific project involved.

3.6.1.2 Unauthorized Deviations. Any changes desired beyond the scope of the above "authorized deviations" must be specifically approved by the District and are known as "unauthorized deviations." Permission to use "unauthorized deviations" must ultimately come from the Division office; therefore, a long lead time is necessary. Where "unauthorized deviation" is approved for use, a note to that effect shall be written in the back of the guide following the "Notes" which includes the reasons why and makes reference to a letter or other specific authorization.

3.6.1.3 Tables of Contents for individual specification sections over 10 pages long are desirable, and shall be provided when the specific technical guide specification furnished has been furnished with a table of contents. Pages of Tables of Contents shall be numbered with lower-case Roman numerals, e.g., "i" or "ii."

3.6.2 Titles and section numbers shall be as approved in the outline specifications. If no outline specifications were required guide specification titles and section numbers shall be in accordance with paragraph **FORMAT FOR OUTLINE SPECIFICATIONS** of chapter 2.

3.6.3 Editing of Guide Specifications shall normally be performed in any manner consistent with the office procedures of the A-E firm, however, certain types of projects may require submittal of mark-up hard copies of guide specifications. For marked-up guide specifications all material not to be final typed shall be lined out or crossed out with a black pencil. Paragraphs shall be renumbered when necessary but shall always be renumbered in the numerical format consistent with the latest guide specifications.

3.6.4 The paragraph **REFERENCES** which precedes the text of each guide specification shall be edited to be consistent with the text. Only those publications which are referred to in the remaining text should remain. The issue date of references included in project specifications need not be more current than provided by the latest change (notice) to the guide specification.

3.6.5 Trade Names and Proprietary Items.

3.6.5.1 Contracts issued by the Federal Government forbid the use of proprietary or exclusionary specifications in obtaining materials, equipment, and services, except when it is considered essential. Sole source requirements (only one acceptable brand name

product) may be specified but shall be fully justified in writing by the A-E to the project manager. Justification shall clearly state why no other product is acceptable. The A-E shall not design around or specify a sole source item until approval is secured (by waiver) by the Seattle District from North Pacific Division of the U.S. Army Corps of Engineers.

3.6.5.2 "Brand name or equal" specifications shall be held to a minimum and shall be limited only to instances where adequate performance or quality standards do not exist. Brand name specifications shall be used only when a specific product or particular feature of a product is considered essential to the Government's requirements, in which case at least two acceptable brand name products shall be referenced along with the words "or equal." In addition, the salient physical and functional characteristics shall be included. Generic identification of the product is the preferred method of specifying qualitative requirements.

3.6.6 The construction contract used by the Corps of Engineers is a two-party contract. The only parties involved are the Contractor and Contracting Officer. Whenever the terms "Contractor" or "Contracting Officer" are used in the specifications they must be capitalized. Do not refer to any third party (i.e., "Owner," "Architect," "Engineer," "Electrical Subcontractor," or other subcontractors).

3.6.7 A 1-year warranty clause will be included in Division 1 of the Technical Specifications. Several Guide Specifications contain guarantee clauses which require extended warranties which shall be retained but none shall be added to Guide Specifications not now containing them. When a section is to be A-E prepared, a special guarantee or warranty clause shall not be used unless the material or equipment is of special design where the interest of the Government clearly requires such a clause.

3.6.8 Architect-Engineer Prepared Sections. When subject matter cannot be found in the existing guide specification, it must be included in an existing guide or be written up as a new section. An A-E prepared new section shall follow the format of the most recent Guide Specifications (CSI format) and precisely state what is expected from the Contractor in clear and concise language. Vague statements shall be avoided (i.e., do not use: to the satisfaction of the Contracting Officer, in neat and workmanlike manner, good working order, or tests will be made unless waived). Carefully coordinate the text with the drawings to prevent conflicts.

3.6.9 Government property as referred to in military construction contracts will be classified in the categories specified below and the specifications will be prepared as follows:

3.6.9.1 Government-furnished, Contractor-installed (GF/CI) property is property in the possession of, or acquired directly by, the Government and subsequently delivered or otherwise made available to the Contractor to be incorporated or installed in the work or used in its performance. GF/CI property may be new or used and may or may not need repairs or alterations. Items of Government property brought relocated/reused in the work are not to be considered GF/CI property unless the Government takes possession of the property from the Contractor and repairs or alters the property at no expense to the Contractor and then returns the property to the Contractor for reinstallation in the

work. GF /CI property will be listed in the SPECIAL CLAUSES of the contract and the drawings shall indicate such items as "GF/CI." A list of Government-furnished property including location where listed property will be made available to the Contractor shall be prepared by the A-E for this purpose (exhibit 3F).

3.6.9.2 Government-furnished, Government-installed (GF/GI) property will be procured and installed by the using agency. The contract drawings will indicate the location and include provisions necessary for installation by others. The equipment schedule on the drawings shall indicate GF/GI items.

3.6.9.3 Salvaged materials and equipment is property removed by the contractor and turned over to the using agency. The term "salvage" shall be used only in connection with property removed by the Contractor to be retained by the Government. Salvage items shall be included in the Demolition Section of Division 2, SITE WORK.

3.6.9.4 Contractor salvage is defined to be all materials and equipment that shall become the property of the Contractor, regardless of value. Materials and equipment will become property of the Contractor when the materials and equipment are removed from Government property.

3.6.10 Shop Drawings Submittal Requirements. Technical Specifications for items or equipment requiring shop drawings shall be prepared to only state "shop drawings shall be submitted." This may be contrary to what is stated in the guide specifications as some guide specifications state for Contracting Officer approval. The completed shop drawing submittal register ENG FORM 4288 will indicate which items or equipment shall be submitted for Contracting officer approval and which shall be submitted for information only. See exhibit 3I for guidance. The Corps of Engineers project manager will provide the A-E with blank ENG Form 4288.

3.6.11 Section 01400. Contractor Quality Control. The A-E shall edit Section 01400 to conform to specifications being prepared for each specific project. The A-E shall, at time of requesting guide specifications, request copy of section 01400 (see exhibit 3J for copy of Section 01400). Any reference in the technical specifications to Construction Quality Control shall be changed to read Contractor Quality Control.

3.7. A-E Input to Division 1. The Seattle District Specifications Section will finalize Division 1 after receiving input from the A-E. Input shall be due early enough during the final design effort to allow the Seattle District two (2) weeks to finalize and return the sections to the A-E for consolidation with the other specification sections prior to final design submission for final review.

3.7.1 Section 01001. Supplementary Requirements. The A-E shall provide input pertaining to any special requirements or restrictions such as construction phasing or sequence, power outages, etc.

3.7.2 Section 01005. Base Specific Supplementary Requirements. Seattle District prepared.

3.7.3 Section 01025. Measurement and Payment. The A-E shall provide measurement and payment paragraphs and in addition shall furnish the schedule with bid items. A-E shall furnish estimated quantities when there are unit price items.

3.7.4 Section 01035. Modification Procedures. Seattle District prepared.

3.7.5 Section 01061. Environmental Protection. The A-E shall provide input if there are any special environmental protection requirements.

3.7.6 Section 01300 to 01305. Submittal Procedures. Seattle District prepared, expect A-E shall provide a typed submittal register on ENG Form 4288.

3.7.7 section 01400. Contractor Quality Control. The A-E shall provide marked-up section.

3.7.8 Section 01501. Construction Facilities and Temporary Controls. Seattle District prepared.

3.7.9 Section 01701. Operations and Maintenance Manuals. Seattle District prepared.

3.7.10 Section 01702. A6-Built Records and Drawings. Seattle District prepared.

3.7.11 Section 01703. Warranty of Construction. Seattle District prepared.